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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,843	01/11/2002	Louis J. Adimari	DAR-54-98	4456

7590 09/22/2004

Attn: AMSTA-AR-GCL
U.S. Army TACOM-ARDEC
M. Sachs / Building 3
Picatinny Arsenal, NJ 07806-5000

EXAMINER

NGUYEN, TRINH T

ART UNIT PAPER NUMBER

3644

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,843

Applicant(s)

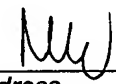
ADIMARI, LOUIS J.

Examiner

Trinh T Nguyen

Art Unit

3644



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-14 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 4 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with indefinite phrases too numerous to mention completely. Applicant is encouraged to carefully review the claims and rewrite them so that all claimed limitations are positively and clearly set forth and it can be determined what is being claimed.

The following are examples only and not intended to be a complete listing thereof:

In claim 1: the phrases "the expulsion gas pressure", "the projectile base assembly", and "the grenades" lack proper antecedent basis.

In claim 2: the phrase "the projectile time fuze" lacks proper antecedent basis.

In claim 3: the phrases "the projectile grenade payload", "the payload expulsion charge assembly", "the means which contains the munition payload", and "the munition payload" lack proper antecedent basis.

In claim 4: the phrases "the projectile body section", "the air stream" lack proper antecedent basis.

In claim 5: the phrases "the projectile payload section", "the space", "the payload canister assembly", "the allowable capacity", "the said projectile section", and "the said payload canister" lack proper antecedent basis; and the phrase "a right handed clockwise rotation as a function of the allowable capacity of the said projectile section as viewed from the said payload canister" is confusion because it is unclear as to what this phrase defines or intends to be encompassed.

In claim 6: the phrase "the pre-engraved/engraving copper band" lacks proper antecedent basis.

In claim 7: the phrases "the outer grenades", "the inner diameter", and "the said cylinder" lack proper antecedent basis; the phrase "seating the outer grenades in the scallop shape...independently of the said cylinder" is a method step which is an improper citation within an apparatus claim.

In claim 8: the phrases "the outer rear of the cylindrical body" and "the payload canister section" lack proper antecedent basis.

In claim 9: the phrases "the projectile payload", "the transmitted pressure", "the said projectile canister", "the base fin assembly", "the treads", "the tail fin assembly", and "the projectile payload section" lack proper antecedent basis.

In claim 10: the phrases "the target", "the said payload canister section", "the rifled design of the projectile payload section", "the said canister assembly", the projectile body section", and "the canister" lack proper antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5, 9, 11, 12-14, 16, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bueno et al. (US 4,726,297).

For claim 1, Bueno et al. disclose a grenade dispense mechanism for non-spin dual purpose improved conventional munitions wherein the dispense mechanism comprises:

means (gunpowder 15) to initiate grenade payload expulsion;

means (cones 4, spring 14, radial pin 13, and extending pin 103) to expulse grenade payload from projectile body;

means (plate 2) to seal the expulsion gas pressures;

means (member 19) to contain grenade payload;
means (shearing pins 21 and 11) to separate the projectile base assembly (20) from the projectile body (19);
means to cause the grenades to disperse and stabilize to form uniform pattern effects area over the target (see lines 1-37 of col. 3).

For claim 2, Bueno et al. further disclose the means which initiates expulsion of the grenade payload is the projectile time fuze which provides the initiation output to the said means to expulse said payload from the projectile.

For claim 3, Bueno et al. further disclose the means which expulse the projectile grenade payload from the projectile body is the payload expulsion charge assembly which comprises:

a propellant to produce gases which further on;
a pusher plate or piston (2) onto which the gases from the propellant act through the means which contains the munition payload.

For claim 5 (as best understood), Bueno et al. further disclose the means which contain the grenade payload is the projectile payload section which further comprises:
the space occupied by the payload canister assembly;
an internal diameter steel (3) designed for rifling to produce a right handed clockwise rotation as a function of the allowable capacity of the said projectile section as viewed from the said payload canister.

For claim 9, Bueno et al. further disclose the means to separate the projectile base assembly from the projectile body which expulse the projectile payload from the

projectile body is the transmitted pressure through the said projectile canister which separates the base fin assembly by the shearing of the treads joining the tail fin assembly to the projectile payload section (see lines 55-68 of col. 2 and lines 1-21 of col. 3).

For claim 11, Bueno et al. further disclose the grenade payload is M80 or dual purpose anti-personnel, anti-material munitions.

Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 8, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bueno et al. (US 4,726,297) in view of Ortysky (US 2,809,583).

Bueno et al. disclose most of the claimed invention except for a partitioned steel cylindrical hollow body section in the form of a scallop joined by a tongue and groove design.

Ortysky teaches a similar device as that of Bueno et al. in which Ortysky's device having a partitioned metal (note that steel is metal) cylindrical hollow body section in the form of a scallop joined by a tongue and groove design (24, 26). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Bueno et al. so as to include a partitioned cylindrical hollow body section in the form of a scallop joined by a tongue and groove design, in a similar

manner as taught in Ortysky, since to do so would allow the payload canister to be ruptured with ease and the contents therein dispersed over a wide area.

Further note that Bueno et al. disclose means (5 solid cylindrical members and 1 hollow cylindrical member locate in between grenade package 30 of Figure 3) to hold secure a grenade package (30) of dual purpose anti-personnel anti-material grenades and means to accept the pre-engraved/engraving copper band and plastic obturator is by notching the outer rear of the cylindrical body of the payload canister section (note that in Figure 1 there is a notch (the thinner area between reference numbers A and 21) in the outer rear of the cylindrical body of the payload canister section 19).

7. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bueno et al. (US 4,726,297) in view of Ortysky (US 2,809,583), and further in view of Brooks et al. (US 6,672,220).

Bueno et al. as modified by Ortysky (emphasis on Ortysky) further discloses seating the outer grenades in the scallop shape of the inner diameter of the cylindrical hollow body section to prevent them from rotating independently of the said cylinder and that a plurality of centering discs/spacers (64) are used to secure the inner grenades together (see Figure 10). However, Bueno et al. as modified by Ortysky discloses most of the claimed invention except for a plastic centering disc/spacer.

Brooks et al. teach a similar device as that of Bueno et al. as modified by Ortysky in which Brooks et al.'s device using a plastic centering disc/spacer (232). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Bueno et al. as modified by Ortysky so as to

include the use of a plastic centering disc/spacer, in a similar manner as taught in Brooks et al., in order to hold the grenades in place and prevent movement.

8. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bueno et al. (US 4,726,297) in view of Adimari (US 3,981,244).

Bueno et al. disclose most of the claimed invention except for a pre-engraved rotating band attached to the said payload canister section constructed with lands and grooves which fit through the rifled design of the projectile payload section thus causing the said canister assembly to emerge from the projectile body section with spin and velocity to separate the canister and disperse the grenades.

Adimari teaches a similar device as that of Bueno et al. in which Adimari's device having for a pre-engraved rotating band (22) attached to the payload canister section (19) constructed with lands and grooves which fit through the rifled design of the projectile payload section thus causing the said canister assembly to emerge from the projectile body section with spin and velocity to separate the canister and disperse the grenades (see Figure 1 and lines 40-45 of col. 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Bueno et al. so as to include the use of a pre-engraved rotating band, in a similar manner as taught in Adimari, since to do so would allow the canister assembly to emerge from the projectile body section with spin and velocity to separate the canister and disperse the grenades.

Allowance Subject Matter

9. Claims 4 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.


Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as cited in form PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on (703) 305-7421. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


Trinh Nguyen
Patent Examiner, AU 3644
09/17/04